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IN THE CLAIMS:

1. (currently amended) A method of implementing a plurality of communication channels on a single twisted pair telephone connection, said method comprising the steps of:

interfacing a first communication device with said telephone connection, said first communication device configured to communicate ~~[[over]]~~ with said telephone connection on a first communication channel defined by a first frequency band, said first communication channel occupying the lowest available frequency band from a plurality of predetermined frequency bands;

interfacing a second communication device with said telephone connection, said second communication device configured to communicate with said telephone connection on a second communication channel, said second communication channel occupying the lowest available frequency band from said plurality of predetermined frequency bands that is unoccupied by said first communication channel; and

interfacing a third communication device with said telephone connection, said third communication device configured to communicate with said telephone connection on a third communication channel, said third communication channel occupying the lowest available frequency band from said plurality of predetermined frequency bands that is unoccupied by said first communication channel and said second communication channel;

~~wherein~~ whereby said first, second, and third communication channels ~~each reside in~~ occupy separate predetermined frequency bands.

2.-4. (cancelled)

5. (withdrawn) In a network connection including a first communication device communicating with said network across a single twisted pair telephone line in the baseband POTS frequency band, a method of deriving additional

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communication channels over said single twisted pair telephone line comprising the steps of:

coupling a plurality communication devices to said network connection;

detecting a communication request from one of said communication devices and, in response;

monitoring the signal quality in a series of predefined frequency bands successively higher than said POTS frequency band and configuring said communication device to communicate with said network across the first said predefined frequency band wherein said signal quality is above a threshold value.

6.-11. (cancelled)